DESIGN OF THE TRANSIT ACCESS POINT HARDWARE PLATFORM (ThuAmOR10)

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Abstract :

Our objective is to design, analyze, prototype and experimentally study the theoretical underpinnings for a wireless internet that simultaneously achieves deployability, scalability, high performance and a cost−effective economic model. A core building block will be what we call wireless Transit Access Points. A transit access point, or TAP, is a wireless base station with two major features. First, like any standard base station, it provides wireless data services to mobile users. Second, and more importantly, a TAP is capable of high speed wireless links to other TAPs. These connections utilize multiple antennas at each end to dramatically increase the spectral efficiency and throughput of the link. Such TAP−to−TAP links are designed to supplement, or even replace, the wired network infrastructure usually required when deploying wireless data systems. This paper presents the custom hardware platform designed for the TAPs project.

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